DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 7, 2009 has been entered.
2. Claims 1-4, 8-10, 12-21, 23-26, 29-36, and 45-50 are pending.

Response to Arguments

3. Applicant's arguments with respect to the prior art rejections of the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 23-26, 29-36, and 48-50 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

6. Claim 23 recites, “A device for processing a request…comprising: means for receiving...means for determining…means for forming...means for processing…"

All the limitations of the device may be interpreted and implemented as software alone, when read in light of the specification; also, see, as an example, claim 43 (i.e., the method may be implemented as software alone). Therefore the claim is directed to functional descriptive material that is not tangibly embodied on a computer system, which is non-statutory.

7. Claim 29 is rejected by similar reasons to that set forth in claim 23's rejection.

8. Claims 24-26, 30-36, and 48-50 depend from either claim 23 or 29, do not alleviate the rejections presented above, and therefore, are similarly rejected.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-10, 12-27, 29-36, 39-40, and 43-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over (US Pub. No. 2003/0018818), hereafter “Boliek,” in view of Chan et al (US Pub. No. 2003/0113027), hereafter “Chan,” and what was well known in the art.

11. As to claim 1, Boliek discloses a method of processing a request coming from a first communication apparatus connected through a communication network to a remote second communication apparatus, the method being implemented in the second apparatus (Abstract), the method comprising the steps of:

receiving the request, wherein the request is for obtaining digital data of a compressed digital signal that comprises header data and a signal body comprising data packets ([0039] and [0033] discloses that the codestream (digital data) comprises a main header and tiles that make up the signal body; client (first apparatus) requests all or portion of code stream (digital data) from server (second apparatus));

forming the at least one pointer marker in the compressed digital signal when at least one pointer marker providing information for calculating the length of the part of the signal body is not present in the header ([0033], header contains makers that describe the image characteristics that apply to the whole image or individual components and the codestream is located at the server (second apparatus) and is requested by a client (first apparatus) as disclosed in [0039]; as the pointer markers are in fact present the Boliek disclosure, it reads on the claim language because the pointer markers are necessarily formed if they are not present), and

processing the request including determining a position, in the body of the signal, of at least one data packet corresponding to the request ([0043], the client request specific ranges of bytes in the codestream using the starting point in

memory, i.e. the position in the body of the codestream, thus when the server processes the incoming request it determines the position in the body of the signal of corresponding data packets).

But, Boliek does not explicitly disclose determining whether or not at least one pointer marker is present in the header data and the forming of the at least one pointer marker in the signal is responsive to a negative determination.

However, Chan discloses determining whether or not at least one pointer marker is present in the header data ([0157], it is determined whether or not correct pointer markers are present in the stream), and the forming of an at least one pointer marker in the signal responsive to a negative determination ([0157], the pointer markers are rewritten; i.e. if they were not present correct ones will be added and if they were present, correct pointer markers will be added).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Boliek and Chan in order to ensure the presence and accuracy of pointer markers in Boliek's system, which would thereby decrease errors.

Further, Boliek and Chan may not explicitly disclose that the position is determined as a function of the length of the header data and of at least one

pointer marker present in the header data of the signal, the at least one pointer marker providing information for calculating the length of the part of the body preceding the data packet under consideration. Boliek does disclose the request indicates the position of the data packets in memory ([0043]), but does not disclose what the memory locations are relative to (e.g. the server or the codestream). However, one of ordinary skill in the art would with it as obvious to use either memory locations relative to the server or to the codestream as this is a common practice in the art when requesting data (i.e. requesting data based on its location relative to the memory of the sending device or its location relative to the transmitting stream of data). As Boliek has disclosed the structure of a codestream (Fig. 4 and [0057]) and the functions of header data ([0033]) and pointer markers ([0052]), simply having the request indicate the position of a data packet relative to the codestream would make that position of a function of the length of the header data and of at least one pointer marker present in the header data of the signal. Therefore it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use memory locations relative to the codestream in the request to simply the retrieval procedure of requested data packets.

12. As to claim 12, Boliek discloses a method of processing compressed digital data received by a first communication apparatus connected through a communication network to a remote second communication apparatus, the method being

implemented in the first communication apparatus, (Abstract), the method comprising the steps of:

receiving only a portion of a compressed digital signal present in the second apparatus and comprising a body that comprises data packets, the received portion of the compressed digital signal comprising at least one data packet ([0042], lines 5-12, client (first apparatus) requests an image (compressed digital signal) from a server(second apparatus); client receives and orders the codestream piecemeal, i.e. one received portion at a time, [0045]);

creating a derived compressed digital signal derived from the compressed digital signal present in the second apparatus in the form of a cache file, the derived compressed digital signal comprising header data and a body and capable of containing all or part of the body of the compressed digital signal present in the second apparatus ([0042], lines 5-12, client (first apparatus) requests an image (compressed digital signal) from a server(second apparatus); client receives and orders the codestream piecemeal, i.e. one received portion at a time, [0045], the memory it is stored in reads on a “cache”);

determining a position at which the at least one data packet of the received portion of the compressed digital signal is to be inserted into the body of the derived compressed digital signal ([0045], data packets are received from the server and inserted to create a correct JPEG 2000 codestream, this is done piecemeal, i.e. one received portion at a time)

the position being determined as a function of at least one pointer marker previously received and inserted into header data of the derived compressed digital signal by the first apparatus ([0052], once main header data, which includes markers is received, positions of every data packet and therefore their insertion point are known; [0059] further illustrates this process),

the at least one pointer marker providing information for calculating the length of the part of the body of the derived compressed digital signal preceding the at least one data packet of the received portion of the compressed digital signal ([0052] and [0057] further illustrating this process) and

inserting into the body of the derived compressed digital signal said at least one data packet of the received portion of the compressed digital signal at the determined position ([0045]).

But, Boliek may not explicitly disclose filling the body of the derived compressed digital signal in the cache file with arbitrary data, so as to constitute a space of the same size as the body of the compressed digital signal present in the second apparatus.

However, Chan discloses filling the body of the derived compressed digital signal in the cache file with arbitrary data, so as to constitute a space of the same

size as the body of the compressed digital signal present in the second apparatus ([0192], lines 13-23, space is left blank (i.e. arbitrary data) so as to reserve space for the image).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Boliek and Chan in order to reserve space in the Boliek system so as to ensure the entire file would be able to be received.

Further, Boliek and Chan may not explicitly disclose the position being determined as a function of the length of the header data. But, since Boliek does disclose pointer markers indicating the length and starting point of every packet in the codestream ([0052]), simply making the insertion position a function of the length of the header data is an obvious and unsubstantially modification of Boliek to one of ordinary skill in the art as the pointer markers can accomplish this alone.

13. As to claims 23, 39, and 43, they are rejected by the same rationale set forth in claim 1's rejection.

14. As to claims 29, 40, and 44, they are rejected by the same rationale set forth in claim 12's rejection.

15. As to claims 2 and 24, Boliek discloses the determination of the length of the part of the body of the compressed digital signal preceding the data packet under consideration comprises a preliminary step of determining the order of appearance of the data packet in the body of the compressed digital signal, according to parameters relating to structure and organization of the data in the compressed digital signal ([0033], lines 6-11).

16. As to claim 3, 14, 25, and 31, Boliek discloses the compressed digital signal is partitioned into a number n of independently compressed regions t.sub.i, i=1 to n and n.gtoreq.1, the body of the compressed digital signal comprising, for each region, region header data and a region body containing data packets of the region under consideration ([0033], tile-parts are the independently compressed regions and each tile-part has a header and body).

17. As to claims 4, 15, 26, and 32 Boliek discloses the length of the part of the body of the compressed digital signal preceding the data packet under consideration is determined from:

at least one pointer marker PLT providing information for calculating the length of the data packet or packets preceding the data packet under consideration in the region where this packet is located ([0052]),

the length of the header data of the region where the packet under consideration is located and, when one or more regions precede the region where the packet under consideration is located ([0052]).

at least one pointer marker TLM providing information for calculating particular the length of the preceding region or regions ([0052]).

18. As to claims 5 and 16, Boliek discloses the pointer marker TLM providing information for calculating the length of each region t.sub.i is present in the header data ([0052] and [0060]).

19. As to claims 6 and 17, Boliek discloses the pointer marker PLT providing information for calculating the length of the data packets in a region t.sub.i is present in the header data of the region concerned ([0052]) and [0061]).

20. As to claims 7 and 27, Boliek discloses extracting and transmitting to the first communication apparatus the at least one data packet having a position that has been determined ([0043]).

21. As to claim 8, Boliek discloses the request for obtaining digital data specifies at least one data packet of the compressed digital signal ([0043]).

22. As to claim 9, Boliek discloses the request for obtaining digital data specifies part of the compressed digital signal ([0043]).

23. As to claim 10, Boliek discloses subsequent to the request being received, the method comprises a step of identifying the data packet or packets necessary for the reconstruction of the part of the compressed digital signal specified ([0042]).

24. As to claim 13 and 30, Boliek discloses:

receiving the header data coming from the original compressed digital compressed digital signal present in the second apparatus, the received header data comprising at least one pointer marker TLM providing information for calculating the length of the body of the original compressed digital signal ([0033] and [0042], lines 5-12),

forming, from the received header data, the derived compressed digital compressed digital signal which thus comprises, as header data, the received header data and a compressed digital signal body of length equal to that of the body of the original compressed digital signal ([0045]), the body of the derived compressed digital signal representing a space initially filled with arbitrary data and which is intended to contain the data packet or packets received from the second apparatus ([0045]).

25. As to claims 18 and 33, Boliek discloses:

receiving region header data ([0033] and [0042], lines 5-12),;

determining a position at which the received region header data is to be inserted into the body of the derived compressed digital signal ([0033]), the position being determined according to the length of the header data of the derived compressed digital signal and, when one or more regions precede the region header data concerned, according to one or more pointer markers TLM received previously and providing respectively the length of the preceding region or regions ([0052]); and

inserting the received region header data at the determined position ([0045]).

26. As to claims 19 and 34, Boliek discloses the determination of the length of the part of the body of the derived compressed digital signal preceding the data packet under consideration comprises a preliminary step of determining the order of appearance of the data packet in the body of the compressed digital signal according to parameters relating to structure and organization of the data in the compressed digital signal ([0045], and [0052]).

27. As to claims 20 and 35, Boliek discloses:

extracting from the derived compressed digital signal the header data and data packets received ([0042]);

forming the header data of the valid compressed digital signal from the header data extracted from the derived compressed digital signal ([0050]);

concatenating the data packets extracted from the derived compressed digital signal in the body of the valid compressed digital signal ([0045]); and

when one or more data packets present in the body of the original compressed digital signal are not received by the first apparatus, concatenating respectively one or more empty packets in the body of the valid compressed digital signal in the same order of appearance as that adopted in the derived compressed digital signal ([0042]-[0043]).

28. As to claims 21 and 36, Boliek discloses going through the data contained in the body of the derived compressed digital signal ([0042]);

converting, when the data gone through do not correspond to a data packet received from the second apparatus, the space filled by the data concerned into an empty packet ([0042]); and

shifting in an adapted manner the data comprising the remainder of the body of the derived compressed digital signal ([0050]).

29. As to claim 22, Boliek discloses the data received by the first apparatus comprises the reply to a request previously transmitted from the first apparatus to the second apparatus ([0042]).

30. As to claims 45 and 48, Boliek discloses a preliminary step of forming the derived compressed digital compressed digital signal which thus comprises the header

data and a compressed digital signal body of length equal to that of the body of the original compressed digital signal ([0033]), the body of the derived compressed digital signal representing a space initially filled with arbitrary data and which is intended to contain the at least one data packet of the portion received from the second apparatus ([0045]).

31. As to claims 46, 47, 49, and 50, Boliek discloses the insertion into the body of the derived compressed digital signal of the at least one data packet leads to overwriting part of the space initially filled with arbitrary data ([0045], received data is integrated with previously buffered data to form a codestream, i.e. received data is written into the memory of the client device, replacing any arbitrary data that was there previously).

Conclusion

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Dailey whose telephone number is 571-270-1246. The examiner can normally be reached on Monday thru Friday; 9:00am - 5:00pm.
33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen can be reached on 571-272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. J. D./
Examiner, Art Unit 2452

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